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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,316	02/19/2004	Thomas J. Endres	S0465/283640	7621

23370 7590 11/14/2008
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EXAMINER

BAYARD, EMMANUEL

ART UNIT	PAPER NUMBER
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2611

MAIL DATE	DELIVERY MODE
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11/14/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/782,316	Applicant(s) ENDRES ET AL.	
	Examiner Emmanuel Bayard	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3 and 4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is in response to amendment filed on 7/29/08 in which claims 1, 3-4 are pending. The applicant's amendments have been fully considered but they persuasive enough therefore this case is made final. (See Examiner response to arguments).

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Scarpa et al U.S. Patent No 5,673,293.

As per claim 1, Scarpa et al teaches in a wireless communications receiver having a timing recovery module (see figs.1 and elements 240, 340), carrier recovery module (see figs.1 and 4 elements 230, 330), automatic gain control module (see figs.1 and 4 elements 116 or 110), and equalization module (see figs.1 and 4 elements 252, 352), said communications receiver responsive to a received signal to form soft decision samples (see fig.3c) corresponding to said received signal and hard decision samples corresponding to said received signal (see fig.3c and col.7, lines 37-63), a method for jointly operating said timing recovery module, said carrier recovery module, said automatic gain control module, and said equalization module, said method comprising (see also figs.1-2 and 4-7): deriving control signals from said soft and hard decision samples, wherein the control signals comprise a candidate error term and a combining weight (see col.7, lines 37-67 and col.8, lines 1-10 and col.14, lines 38-67); and using

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said control signals to jointly determine operation of said timing recovery module, said carrier recovery module, said automatic gain control module, and said equalization module (see fig.4 output of elements 156 and 136 which are used as feedback control signal and col.6, lines 4-67 and col.7, lines 56-65 and col.8, lines 1-5).

As per claim 3, Scarpa et al inherently teaches wherein the received signal comprises data, the method further comprising: adjusting a sampling phase and frequency of the data (see fig.3a elements 436, 450). Note a PLL (phase locked loop) is well known in the art to adjust phase and frequency of the incoming data therefore Scarpa inherently the claimed limitations.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scarpa et al U.S. Patent No 5,673,293 in view of Eidson et al U.S. Pub No 2004/0042566 A1.

As per claim 4, Scarpa et al teach all the features of the claimed invention except determining the combining weight by comparing the soft decision sample to a nearest element in a source constellation.

Eidson et al teaches combining weight by comparing the soft decision sample to a nearest element in a source constellation (see paragraphs [00012]).

It would have been obvious to one of ordinary skill in the art to implement the teaching of the teaching of Eidson into Scarpa as compute estimate symbols and corresponding reliability metrics as taught by Eidson (see abstract).

Response to Arguments

Applicant's arguments filed 7/29/08 have been fully considered but they are not persuasive. Scarpa does in fact teaches feedback signals having both soft and hard decisions signal to update the equalizer and timing recovery circuit (see col.7, lines 40-67 and col.8, lines 1-5).

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is 571 272 3016. The examiner can normally be reached on Monday-Friday (7:Am-4:30PM) Alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571 272 3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

11/16/2008

Emmanuel Bayard
Primary Examiner
Art Unit 2611

/Emmanuel Bayard/
Primary Examiner, Art Unit 2611

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